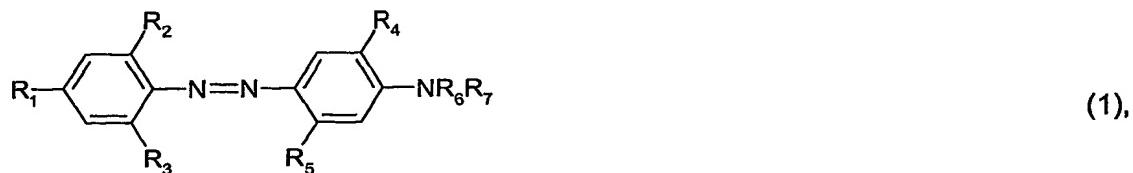


What is claimed is:

1. An ink-jet printing process for printing textile fibre materials, wherein the fiber materials are printed with an aqueous ink comprising
 - (I) at least one disperse dye, and
 - (II) glycerol,
 said ink having a viscosity of from 5 to 20 mPa s at 25°C, and wherein said ink is applied to the fiber material with an ink-jet print head comprising an ink supply layer (b) receiving ink from an external ink reservoir, said ink supply layer having a first side and a second side and comprising, a porous medium having a plurality of pores therein and a plurality of holes extending therethrough, so as to allow passage of the ink.
2. A process according to claim 1, wherein the disperse dye is a dye of the formula



in which

R₁ is halogen, nitro or cyano,

R₂ is hydrogen, halogen, nitro or cyano,

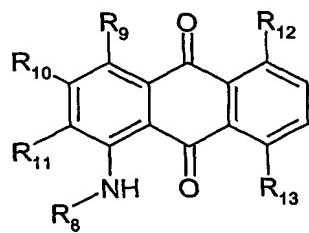
R₃ is hydrogen, halogen or cyano,

R₄ is hydrogen, halogen, C₁-C₄alkyl or C₁-C₄alkoxy,

R₅ is hydrogen, halogen or C₂-C₄alkanoylamino, and

R₆ and R₇ independently of one another are hydrogen, allyl, C₁-C₄alkyl which is unsubstituted or substituted by hydroxy, cyano, C₁-C₄alkoxy, C₁-C₄alkoxy-C₁-C₄alkoxy, C₂-C₄alkanoyloxy,

C₁-C₄alkoxycarbonyl, phenyl or phenoxy,



in which

R_8 is hydrogen, $C_1\text{-}C_4$ alkyl, phenyl or phenylsulfonyl, the benzene ring in phenyl and phenylsulfonyl being unsubstituted or substituted by $C_1\text{-}C_4$ alkyl, sulfo or $C_1\text{-}C_4$ alkylsulfonyloxy,

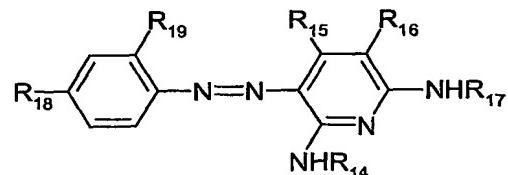
R_9 is hydroxy, amino, N-mono- or N,N-di- $C_1\text{-}C_4$ alkylamino, phenylamino, the benzene ring in phenyl being unsubstituted or substituted by $C_1\text{-}C_4$ alkyl, $C_1\text{-}C_4$ alkoxy, $C_2\text{-}C_4$ alkanoylamino or halogen,

R_{10} is hydrogen, $C_1\text{-}C_4$ alkoxy or cyano,

R_{11} is hydrogen, $C_1\text{-}C_4$ alkoxy, phenoxy or the radical $-O\text{-}C_6H_5\text{-}SO_2\text{-}NH\text{-}(CH_2)_3\text{-}O\text{-}C_2H_5$,

R_{12} is hydrogen, hydroxy or nitro, and

R_{13} is hydrogen, hydroxy or nitro,



in which

R_{14} is $C_1\text{-}C_4$ alkyl which is unsubstituted or substituted by hydroxy,

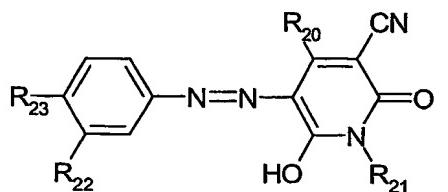
R_{15} is $C_1\text{-}C_4$ alkyl,

R_{16} is cyano,

R_{17} is the radical of the formula $-(CH_2)_3\text{-}O\text{-}(CH_2)_2\text{-}O\text{-}C_6H_5$,

R_{18} is halogen, nitro or cyano, and

R_{19} is hydrogen, halogen, nitro or cyano,



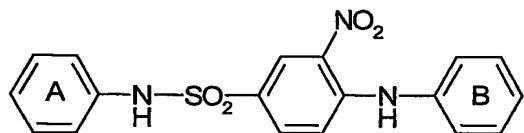
in which

R₂₀ is C₁-C₄alkyl,

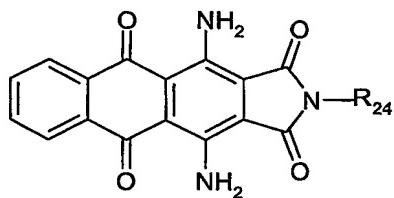
R₂₁ is C₁-C₄alkyl which is unsubstituted or substituted by C₁-C₄alkoxy and

R₂₂ is the radical -COOCH₂CH₂OC₆H₅ und R₂₃ is hydrogen or

R₂₂ is hydrogen and R₂₃ is the radical -N=N-C₆H₅,

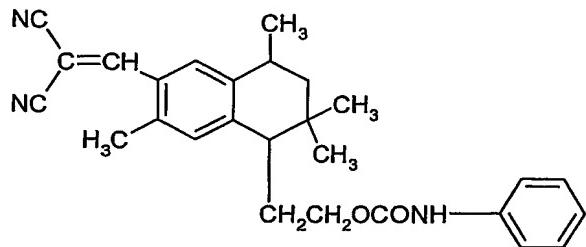


where the rings A and B are unsubstituted or substituted one or more times by halogen,



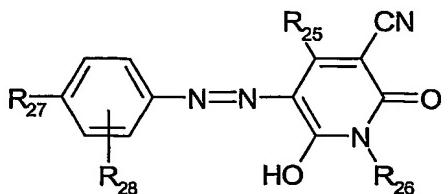
in which

R₂₄ is C₁-C₄alkyl, which is unsubstituted or substituted by hydroxy, C₁-C₄alkoxy, C₁-C₄-alkoxy-C₁-C₄alkoxy, C₂-C₄alkanoyloxy or C₁-C₄alkoxycarbonyl,



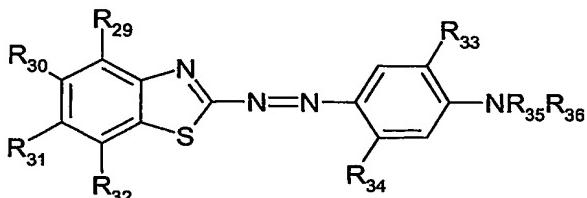
- 40 -

PCT/EP2004/052451



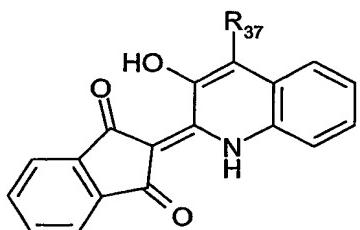
(8),

in which

R₂₅ is C₁-C₄alkyl,R₂₆ is C₁-C₄alkyl, which is unsubstituted or substituted by C₁-C₄alkoxy,R₂₇ is hydrogen, C₁-C₄alkoxy or halogen, andR₂₈ is hydrogen, nitro, halogen or phenylsulfonyloxy,

(9),

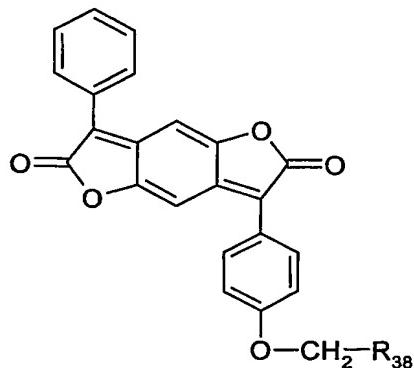
in which

R₂₉, R₃₀, R₃₁ and R₃₂ independently of one another are hydrogen or halogen,R₃₃ is hydrogen, halogen, C₁-C₄alkyl or C₁-C₄alkoxy,R₃₄ is hydrogen, halogen or C₂-C₄alkanoylamino, andR₃₅ and R₃₆ independently of one another are hydrogen, C₁-C₄alkyl, which is unsubstituted or substituted by hydroxy, cyano, acetoxy or phenoxy,

(10),

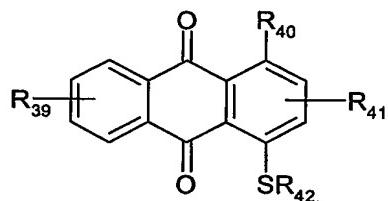
in which

R₃₇ is hydrogen or halogen,



in which

R_{38} is hydrogen, C₁-C₄alkyl, tetrahydrofuran-2-yl or C₁-C₄alkoxycarbonyl, which is unsubstituted or substituted in the alkyl by C₁-C₄alkoxy,



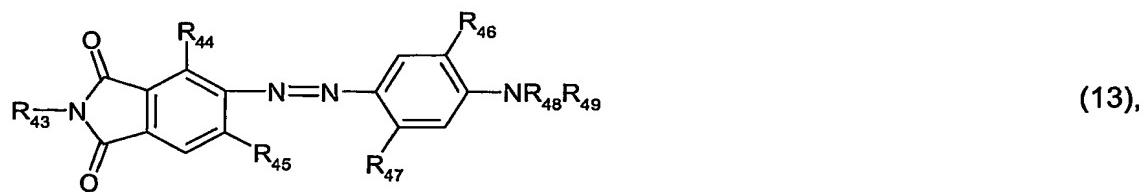
in which

R_{39} is hydrogen or thiophenyl, which is unsubstituted or substituted in the phenyl by C₁-C₄alkyl or C₁-C₄-alkoxy,

R_{40} is hydrogen, hydroxy or amino,

R_{41} is hydrogen, halogen, cyano or thiophenyl, which is unsubstituted or substituted in the phenyl by C₁-C₄alkyl or C₁-C₄-alkoxy, phenoxy or phenyl, and

R_{42} is phenyl, which is unsubstituted or substituted by halogen, C₁-C₄alkyl or C₁-C₄-alkoxy,



in which

R_{43} is hydrogen or C₁-C₄alkyl,

R_{44} and R_{45} independently of one another are hydrogen, halogen, nitro or cyano,

R₄₆ is hydrogen, halogen, C₁-C₄alkyl or C₁-C₄alkoxy,

R₄₇ is hydrogen, halogen or C₂-C₄alkanoylamino, and

R₄₈ and R₄₉ independently of one another are hydrogen or C₁-C₄alkyl, which is unsubstituted or substituted by hydroxy, cyano, C₁-C₄alkoxy, C₁-C₄alkoxy-C₁-C₄alkoxy, C₂-C₄alkanoyloxy, C₁-C₄alkoxycarbonyl, phenyl or phenoxy.

3. A process according to claim 1 or 2, wherein

the ink comprises glycerol in an amount of from 5 to 60 % by weight, preferably from 5 to 50 % by weight, based on the total weight of the ink.

4. A process according to any one of claims 1 to 3, wherein

the viscosity of the ink is from 6 to 14 mPa·s at 25°C, preferably from 8 to 11 mPa·s at 25°C.

5. A process according to any one of claims 1 to 4, wherein

the ink further comprises diethylene glycol or dipropylene glycol, in particular dipropylene glycol.

6. A process according to any one of claims 1 to 5, wherein

printing is performed by means of an ink-jet printing device provided with at least one ink-jet print head which comprises

- a nozzle layer (a) defining a plurality of ejection nozzles,
- an ink supply layer (b) which is formed from a porous material having a multitude of small interconnected pores so as to allow passage of ink therethrough, said ink supply layer featuring a plurality of connecting bores from the rear surface to the front surface, each of said connecting bore being aligned so as to connect between a corresponding one of said ejection nozzles and
- a deflection layer (c), comprising a plurality of transducers related to said connecting bores for ejecting ink droplets out through the nozzles.

7. A process according to any one of claims 1 to 6, wherein

printing is performed by means of an ink-jet printing device provided with at least one ink-jet print head which comprises

- a nozzle layer (a) defining a plurality of ejection nozzles,

- an ink supply layer (b) having a front surface associated with the nozzle layer and a rear surface associated with a cavity layer (d), said ink supply layer being formed with a plurality of connecting bores from said rear surface to said front surface, each connecting bore being aligned so as to connect between a corresponding one of said ink cavities and a corresponding one of said ejection nozzles, wherein said ink supply layer additionally features
 - (i) a pattern of ink distribution channels formed in said front surface, and
 - (ii) at least one ink inlet bore passing from said rear surface to said front surface and configured so as to be in direct fluid communication with at least part of said pattern of ink distribution channels, said pattern of ink distribution channels and said at least one ink inlet bore together defining part of an ink flow path which passes from said rear surface through said at least one ink inlet bore to said pattern of ink distribution channels on said front surface, and through said porous material to said plurality of ink cavities.
- a deflection layer (c), comprising a plurality of transducers related to said connecting bores for ejecting ink droplets out through the nozzles.

8. A process according to any one of claims 1 to 7, wherein the transducer is a piezoelectric element.

9. A process according to any one of claims 1 to 8, wherein polyester-containing fibre materials are printed.

10. An aqueous printing ink for the ink-jet printing process, comprising

- (I) at least one disperse dye selected from the group of dyes of the formulae (1) to (13) according to claim 2,
- (II) from 10 to 35 % by weight of glycerol based on the total weight of the ink, and
- (III) from 10 to 25 % by weight of dipropylene glycol based on the total weight of the ink, said ink having a viscosity of from 5 to 20 mPa s at 25°C.